



FACT SHEET



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NATIONAL MISSILE DEFENSE EARLY WARNING SYSTEM

INTRODUCTION

The United States has an existing early warning system to detect incoming ballistic missiles and track space debris. This system which would be used by the National Missile Defense (NMD) program consists of early warning radars and Defense Support Program satellites. In addition to the existing systems, the Air Force is currently developing the Spaced Based Infrared System (SBIRS), a replacement for the Defense Support Program satellites.

UPGRADED EARLY WARNING RADARS

The U.S. early warning radars are phased-array surveillance radars used to detect and track ballistic missiles targeted at the United States. Upgrades to these existing early warning radars would provide the capability to support NMD surveillance requirements. The UEWR system would consist of existing Ultra High Frequency (UHF) early warning radars. Hardware and software modifications are planned for the existing radars. The modifications would not change the maximum power output of the radar or the exterior of the facility. Modifications would co-locate new displays and processors next to existing interior equipment.



The Upgraded Early Warning Radar

SPACE-BASED DETECTION SYSTEM

Defense Support Program Satellites:

Existing Defense Support Program satellites provide the U.S. early-warning satellite capability. The satellites are comparatively simple, inertially fixed, geosynchronous earth orbit satellites with an unalterable scan pattern. SBIRS will replace the Defense Support Program satellites sometime in the next decade. NMD will use whichever system is in place when a deployment decision is made and can use a combination of the two if the transition is still in progress.

Spaced Based Infrared System: SBIRS would be an additional element that future NMD systems would utilize. SBIRS is currently being developed by the Air Force independently of NMD as part of the early warning satellites system upgrade which would replace the Defense Support Program satellites. For the NMD program, the SBIRS constellation of sensors satellites would acquire and track ballistic missiles throughout their trajectory. This information would provide the earliest possible trajectory estimate to the Battle Management, Command, Control, and Communications (BM/C3) element. Since SBIRS would be deployed independent of NMD, a detailed description and evaluation of impacts will be evaluated by the Air Force.

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